

## WHAT IS CLAIMED IS:

1. A data packet transfer network for transmitting a communication data by dividing the communication data to a plurality of data packets, comprising a plurality of packet transfer nodes, each said packet transfer node comprising at least a data packet comparison circuit for comparing sequential numbers of received data packets with sequential numbers of data packets received in the past and a data packet copy circuit for copying the data packets in the order of the sequential numbers thereof and transferring the data packets to a next packet transfer node in the order of the sequential numbers.
2. A data packet transfer network as claimed in claim 1, wherein said data packet comparison circuit discards the data packets received in the past when the sequential numbers of the received data packets are the same as those of the data packet received in the past.
3. A data packet transfer network as claimed in claim 1, wherein each said packet transfer node further comprises memory means for storing the received data packets in a comparison table when the received data packets are new data packets.
4. A data packet transfer network as claimed in claim 3, wherein, when the sequential number of the received data packet is that of a last data packet, the last data packet is discarded from said comparison table and the received data packets are transferred to a next packet transfer node.
5. A data packet transfer network for transmitting a communication data by dividing the communication data to a plurality of data packets, comprising a

plurality of packet transfer nodes, each said packet transfer node comprising at least a data packet comparison circuit for comparing sequential numbers of  
5 received data packets with sequential numbers of data packets received in the past and a data packet copy circuit for copying the data packets in the order of the sequential numbers thereof and transferring the data packets to a next packet transfer node in the order of the sequential numbers, wherein each said packet transfer node includes transmission route defining means for defining a  
10 plurality of transmission routes and transmitting the data packets to one of said transmission routes correspondingly to a movement of a destination host.

6. A data packet transfer method for transmitting a communication data through a plurality of packet transfer nodes included in a data packet transfer network by dividing the communication data to a plurality of data packets, comprising the steps of, in each of said packet transfer node, comparing  
5 sequential numbers of received data packets sequential numbers of data packets received in the past and stored in a comparison table of said packet transfer node, copying the received data packets in the order of the sequential number, transferring the copied data packets to a plurality of transmission routes and transmitting the copied data packets to one of said transmission  
10 routes corresponding to a movement of a destination host.